330 CMR 31.00

Plant Nutrient Application Requirements for Agricultural Land and Land Not Used for Agricultural Purposes

31.01 Purpose and Authority

The Massachusetts Department of Agricultural Resources promulgates these regulations pursuant to its authority under G.L. c. 128, Sections 2(k) and Section 65(A), as amended by St. 2012, c. 262. 330 CMR 31.00 establishes limitations on the application of plant nutrients to lawns and non-agricultural turf to prevent these non-point source pollutants from entering the surface and groundwater resources of the Commonwealth of Massachusetts. These state-wide limitations on plant nutrient applications will enhance the ability of municipalities to maximize the credits provided in the National Pollution Discharge Elimination System (NPDES) permits issued by the United States Environmental Protection Agency (USEPA). The regulations further ensure that plant nutrients are applied to agricultural land in an effective manner to provide sufficient nutrients for plant growth while minimizing the impacts of the nutrients on water resources in order to protect human health and the environment.

31.02 Effective Date

330 CMR 31.	00 shall take effect	on .
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31.03 Definitions

As used throughout 330 CMR 31.00, the following terms shall have the following meanings, unless the context clearly indicates otherwise:

<u>Agricultural crop</u> - any plant or part of a plant produced primarily for sale, consumption, propagation, or other use by humans or animals.

<u>Agricultural land</u> - land used for agriculture or farming as defined in G.L. c. 128, Section 1A.

<u>Agricultural operation</u> - a business engaged in agriculture or farming as defined in G.L. c. 128, Section 1A. For the purposes of 330 CMR 31.00, an agricultural operation shall include all operations, whether conducted on one or more parcels of land within the Commonwealth, that are owned or operated by the same person.

<u>Agricultural byproducts</u> - secondary organic materials produced from the raising of animals and crops as part of agronomic, horticultural, silvicultural, or livestock operations including, but not limited to, animal manure, liquid manure, bedding materials, plant stalks, leaves, and other vegetative matter and byproducts from the onfarm processing of fruits, vegetables, dairy and other food products.

<u>Agricultural process water</u> - water that is generated as a byproduct from on-farm activities and processing of agricultural products. This term includes water generated

as a byproduct in a milking parlor, milkhouse, or bottling operation.

<u>Animal manure</u> - animal excrement which is produced at an agricultural operation. The term includes materials such as bedding, milking parlor process water, milkhouse process water and other materials after commingling with that excrement.

Applicator - a person who applies any type of plant nutrient.

<u>Biosolids</u> - any thickened liquid, suspended or settled solid, or dried residue extracted from sewage at a sewage treatment plant, including domestic sewage.

<u>Bottling process water</u> - process water that is generated with the washing and rinsing associated with the bottling of agricultural products. Bottling process water does not include process water from bottling operations not directly associated with and located on the same property of the agricultural operation performing the bottling, or to stand alone bottling operations.

<u>Buffer or vegetated buffer</u> - a permanent strip of dense perennial vegetation established parallel to the contours of, and perpendicular to, the dominant slope of the field built for the purposes of slowing water runoff, enhancing water infiltration and minimizing the risk of any potential nutrients from leaving the field and reaching surface waters.

<u>Coarse textured soil</u> - a soil identified by the United States Department of Agriculture as having textures of loamy fine sand, loamy sand or sand.

<u>Cover crop</u> - a crop planted not for harvest but mainly to manage and improve soil and water quality, reduce erosion, reduce weed and other pest pressure, and enhance biodiversity in an agroecosystem.

<u>Crop nutrient needs</u> - the primary nutrient requirements of a crop determined as pounds of nitrogen (N), phosphorus (P2O5), and potassium (K2O) required for production of a crop yield unit.

<u>Department</u> - the Massachusetts Department of Agricultural Resources.

<u>Digestate</u> - the material remaining after the anaerobic digestion process comprised of undigested solids and the liquid fraction of the input material

<u>Fertilizer</u> - commercially produced fertilizers used as soil and plant amendments, containing a guaranteed analysis of primary nutrients; does not include a product blended from organic compost or natural organic fertilizer.

<u>Gravelly soil</u> - soil containing material that is 15 to 50 percent, by volume, rounded or angular rock fragments, not prominently flattened, up to 3 inches in diameter.

<u>Impervious Surface</u> - means any structure, surface, or improvement that reduces or prevents absorption of storm water into land, and includes concrete, asphalt, paver blocks, gravel, decks, patios, elevated structures, and other similar structures, surfaces, or improvements.

<u>Incorporation</u> - the mixing of fertilizer and other materials with the surface soil using standard agricultural practices, such as tillage.

<u>In-field stacking</u> - the practice of stacking solid manure or agricultural byproducts on cropland, hayland and pasture areas to be applied to the land as plant nutrients.

<u>Injection</u> - the placement of liquid fertilizer material beneath the surface of the soil in the crop root zone using equipment specifically designed for this purpose.

<u>Label</u> - the display of all written, printed, or graphic matter on the immediate container or a statement accompanying a fertilizer or soil conditioner.

<u>Lawn or Non-agricultural turf</u> - any non-crop land area that is covered by any grass species, excluding flower or vegetable gardens, pasture, hay land, trees, shrubs, turf grown on turf farms or any form of agricultural production or use.

<u>Lawn patch product</u> - a premixed blend of grass seed, fertilizer, and mulch.

<u>Management unit</u> - an area sharing common characteristics, including soil type, nutrient content, and plant type or crop produced, so that nutrients can be recommended and managed in a uniform and consistent manner.

<u>Massachusetts NRCS Phosphorus Runoff Index or P Runoff Index</u> - a procedure used and recommended by the University of Massachusetts Amherst Extension and National Resources Conservation Services that uses characteristics of soils, landforms, and management practices to identify potential risk of phosphorus losses from soils to waters.

<u>Milkhouse process water</u> - residual milk and wash water generated with the normal operation of a milkhouse. This term does not include the process water containing large volumes of milk or contamination resulting from bulk tank failure or other operation failures, which shall not be land applied.

<u>Natural organic fertilizer</u> - a fertilizer product that is derived from either a plant or animal product containing one or more elements, other than carbon, hydrogen and oxygen, which are essential for plant growth. These materials may be subject to biological degradation processes under normal conditions of aging, rainfall, sun-curing, air drying, composting, rotting, enzymatic or anaerobic or aerobic bacterial action or any combination of those conditions. These materials shall not be mixed with synthetic materials or changed in any physical or chemical manner from the material's initial state except by manipulations such as drying, cooking, chopping, grinding, shredding, hydrolysis or pelleting.

Non-professional - any person who applies a plant nutrient and is not for-hire or does not perform the application as part of his or her employment.

<u>NRCS</u> - the Natural Resources Conservation Services of the United States Department of Agriculture.

<u>Nutrient application rate</u> - the quantity of primary nutrients, as total nitrogen (N), available phosphate (P2O5), and soluble potash (K2O) used to supply crop or plant nutrient needs.

<u>Nutrient content</u> - the percentage of any primary nutrient, as total nitrogen (N), available phosphate (P2O5), or soluble potash (K2O), in any type or source of plant nutrients.

<u>Nutrient management consultant</u> - a professional trained to provide nutrient management recommendations for agricultural crop growing and to develop nutrient management plans.

<u>Nutrient management plan (plan)</u> - a written plan to manage the amount, placement, timing, and application of plant nutrient materials in order to minimize nutrient loss or runoff and to maintain the productivity of soil when growing agricultural products.

Operator - a person who manages or owns an agricultural operation.

<u>Organic compost</u> - the biologically stable humus-like material derived from composting or the aerobic, thermophilic decomposition of organic matter.

<u>Person</u> - any individual, partnership, corporation, firm, association, authority, trust or group, including, but not limited to, a municipality, county, the Commonwealth and its agencies.

<u>Phosphorus containing fertilizer</u> - fertilizer labeled for use on lawn or non-agricultural turf in which the available phosphate content is greater than 0.67 per cent by weight, excluding organic compost and natural organic fertilizer.

<u>Plant Nutrient</u> - a substance that contains one or more of the primary nutrients of nitrogen, phosphorus, potassium, or any recognized plant nutrient, including animal manures, fertilizer, organic compost as fertilizer, fertilizers, natural organic fertilizer, agricultural byproducts, digestate, biosolids or combinations thereof.

<u>Primary nutrient</u> – an element that is essential for normal plant growth and that includes total nitrogen (N), phosphorus (P), and potassium (K).

Retailer - any person who sells fertilizer.

<u>Saturated ground</u> - soil soaked with moisture so that it cannot absorb any more liquid.

<u>Soil test</u> - a technical analysis of soil conducted by a laboratory using standards recommended by the University of Massachusetts Amherst Extension Program.

<u>Stackable agricultural byproduct</u> - agricultural byproduct material with equal or less than 60% moisture content.

<u>Surface waters</u> - all waters other than groundwaters within the jurisdiction of the

Commonwealth of Massachusetts, including, without limitation, rivers, streams, lakes, ponds, springs, impoundments, estuaries, wetlands, coastal waters and vernal pools as defined by 314 CMR. 4.00.

<u>University of Massachusetts Amherst Extension guidelines for nutrient best</u>
<u>management practices</u> - best management practices for agricultural crops, manure
management, plant nutrient use and application, and turf set by the University of
Massachusetts Amherst Extension Center for Agriculture and as published on the
Department's website.

USDA - United States Department of Agriculture.

<u>Water-soluble nitrogen</u> - nitrogen that is readily soluble in water and that is quickly available to the plant.

<u>Waters of the Commonwealth</u> - all waters within the jurisdiction of the commonwealth, including, without limitation, rivers, streams, lakes, ponds, springs, impoundments, estuaries, coastal waters and groundwaters, and vernal pools as defined in G.L. c. 21, Section 26A.

Zone A - the land area between the surface water source and the upper boundary of the bank; the land area within a 400 foot lateral distance from the upper boundary of the bank of a Class A surface water source, as defined in 314 CMR 4.05(3)(a); and the land area within a 200 foot lateral distance from the upper boundary of the bank of a tributary or associated surface water body, as defined by 310 CMR 22.00.

Zone I of a public water supply well - the protective radius required around a public water supply well or wellfield regulated by 310 CMR 22.00. For public water system wells with approved yields of 100,000 gpd or greater, the protective radius is 400 feet. Tubular wellfields require a 250-foot protective radius. Protective radii for all other public water system wells are determined by the following equation: Zone I radius in feet = (150 x log of pumping rate in gpd) - 350. This equation is equivalent to the chart in the Guidelines and Policies for Public Water Systems. A default Zone I radius or a Zone I radius otherwise computed and determined by the Department shall be applied to transient non-community (TNC) and non-transient non-community (NTNC) wells when there is no metered rate of withdrawal or no approved pumping rate. In no case shall the Zone I radius be less than 100 feet.

31.04 Plant Nutrient Application Requirements for Agricultural Land

- (1) Any person who applies or authorizes any person by way of service contract or other arrangement to apply plant nutrients to agricultural land shall:
 - (a) apply plant nutrients according to the University of Massachusetts Amherst Extension guidelines for nutrient best management practices. Any application of biosolids shall also be done in accordance with the requirements of 310

- CMR 32.00, Land Application of Sludge and Septage;
- (b) not apply plant nutrients directly to surface water;
- (c) not apply plant nutrients to saturated ground or on soils that are frequently flooded during a period when flooding is expected; and
- (d) not apply plant nutrients to frozen or snow covered soils.

(2) Application Setbacks

- (a) No application of plant nutrients shall be made:
 - 1. within 100 feet of surface waters used for public water supplies;
 - 2. in a Zone I of a public water supply well;
 - 3. using a broadcast method either with or without incorporation within 50 feet from surface waters unless a vegetated buffer is present, in which case a setback of 25 feet applies;
 - 4. by directed spray or injection of plant nutrients within 10 feet from surface waters; or
 - 5. on pastures and hayfields within 10 feet from surface waters.
- (b) These application setbacks shall not apply to crop growing systems that operationally require proximity to surface waters, provided such applications are done in accordance with the University of Massachusetts Amherst Extension guidelines for nutrient best management practices for such crop growing systems.
- (3) Fall and Winter applications of agricultural byproducts or agricultural process water
 - (a) Fall (September 10 through November 15)
 - 1. Fall applications of agricultural byproducts or agricultural process water shall only be done by injection or incorporation within 48 hours after the application unless the following conditions exist:
 - (i) livestock manure is deposited directly by animals;
 - (ii) the vegetative cover in the field to be applied is greater than 25%;
 - (iii) the application is made to a pasture or hayfield;
 - (iv) the application is of organic compost.
 - (b) Winter (November 16 through March 1)
 - 1. Winter applications of agricultural byproduct and agricultural process water shall only be made if:
 - (i) the operation has inadequate storage and available storage capacity limit has been reached;
 - (ii) the agricultural byproduct is non-stackable (material containing equal to or more than 60 percent water); and
 - (iii) there is no other reasonable option to manage it.
 - 2. The restrictions for winter application of agricultural byproducts or agricultural process water set forth in 330 CMR 31.04(3)(b)1 shall not apply to:
 - (i) livestock manure deposited directly by animals;
 - (ii) application of agricultural byproducts to certain vegetable crops, small grain crops, and small fruit crops as detailed in the University of Massachusetts Amherst Extension guidelines for nutrient best management practices; or

- (iii) a livestock operation generating less than 50,000 gallons of liquid manure or less than 270 cubic yards of solid manure, which corresponds to estimated manure production of 15 lactating dairy cows housed in a barn for 6.5 months per year.
- 3. With the exception of manure deposited directly by livestock, all winter applications of agricultural byproduct or agricultural process water shall:
 - (i) not be made on land with a slope greater than 7 percent;
 - (ii) not be made within 200 feet of surface water;
 - (iii) minimize the rates of application and available acreage used to the greatest extent practical; and
 - (iv) inject or incorporate manure within 48 hours unless there is at least 40 percent crop residue or a vegetative cover crop is present in the field receiving the application.
- (4) Temporary in-field stacking of stackable agricultural byproducts as a part of land application of this material is permissible throughout the year if the following requirements are met:
 - (a) all applications of animal manure shall be made within 120 days of stacking; and
 - (b) the stacks shall be constructed using the University of Massachusetts Amherst Extension guidelines for nutrient best practices and are:
 - 1. placed on appropriate soils, excluding coarsely textured soils or gravelly soils;
 - 2. at least 100 feet from any surface waters or, if a vegetated buffer is in place, at least 35 feet from any such water;
 - 3. outside the Zone I of a public water supply well;
 - 4. at least 200 feet from any residence outside the property;
 - 5. outside of flood prone areas and areas subject to ponding;
 - 6. of shape and size that minimizes absorption of rainfall; and
 - 7. covered when placed in a Zone A of a public surface water supply to minimize runoff.
- (5) Any person who applies or authorizes any person by way of service contract or other arrangement to apply plant nutrients to 10 or more acres of agricultural land or an agricultural operation shall also:
 - (a) develop a nutrient management plan prior to application, in accordance with the University of Massachusetts Amherst Extension guidelines for nutrient best management practices and requirements set forth in 330 CMR 31.05; and
 - (b) apply plant nutrients in accordance with the nutrient management plan for the land application site.

31.05 Nutrient Management Plan Requirements; Testing

- (1) Any person who is required to develop a nutrient management plan as set forth in 330 CMR 31.04(5), shall include the following in said plan:
 - (a) plan identification, which shall include the following:
 - 1. operator name and address; location of all land under the nutrient management plan;

- 2. date the plan was prepared or updated;
- 3. period of time the plan covers; and
- 4. name of the nutrient management consultant responsible for the plan development.
- (b) map or aerial photograph, which shall include the following:
 - 1. one or more maps or aerial photographs that identify the location and boundaries of fields or management units;
 - 2. field or management unit number or identifier;
 - 3. acreage of each field or management unit;
 - 4. location of surface waters supplies, Zone A of public surface water supplies, if present, and Zone I of public water supply wells, if present; and
 - 5. identification of the areas where plant nutrient applications are restricted based on setbacks set forth in 330 CMR 31.04.
- (c) current and/or planned crop and crop rotation for each field or management unit;
- (d) listing of all components of stored agricultural byproducts and agricultural process water to be land-applied, including but not limited to:
 - 1. animal manure;
 - 2. used bedding;
 - 3. spoiled feed;
 - 4. wash water;
 - 5. storm water runoff;
 - 6. milking parlor process water;
 - 7. milk house process water; and
 - 8. silage leachate.
- (e) sample analysis results of plant nutrient content in stored agricultural byproducts and agricultural process water to be land-applied;
- (f) calculation of plant nutrient needs for the crop or crop rotation. Plant nutrient needs shall be based on crop or cropping sequence, soil test results, and established crop removal rates;
- (g) determination of whether a nutrient application plan should be based on nitrogen or phosphorus as a limiting factor. The Massachusetts NRCS Phosphorus Runoff Index shall be used to determine whether manure application rates will be based on nitrogen or phosphorus when the analysis is included in the guidelines for the Massachusetts NRCS Phosphorus Runoff Index or the University of Massachusetts Amherst Extension guidelines for nutrient best management practices;
- (h) determination of the plant nutrient application rates on individual fields or management units shall be based on the following:
 - 1. crop nutrient needs;
 - 2. soil test or plant tissue test results;
 - 3. application of all sources of plant nutrients;
 - 4. results of Massachusetts NRCS Phosphorus Runoff Index, if applicable;
 - 5. environmental factors such as setbacks and buffers;
 - 6. guidelines published in the University of Massachusetts Amherst Extension guidelines for nutrient best management practices; and
 - 7. the best information available at the time a plan is prepared.

- (i) specification of the plant nutrient sources, timing and amount and method of application for each field or management unit; and
- (j) guidance for implementation, operation and maintenance, and record keeping, which record keeping shall be done in accordance with 330 CMR 31.09.
- (2) Plan Maintenance, Updates, and Revisions.
 - (a) Each plan shall be updated every 3 years, except as otherwise provided in subsection (b).
 - (b) A plan limited only to the application of fertilizer may be used for more than 3 years, but not more than 10 years, only if all of the following conditions are met:
 - 1. the operator complies with the soil testing requirements set forth in 330 CMR 31.07, including any changes to plan requirements under these regulations;
 - 2. the soil test analysis verifies that the phosphorus runoff index value is 100 or less, when the analysis is included in the guidelines for the Massachusetts NRCS Phosphorus Runoff Index or the University of Massachusetts Amherst Extension guidelines for nutrient best management practices; and
 - 3. there have been no significant changes to the operation, including the crop rotation, management and tillage systems, and crop yield goals.
 - (c) The Department may require a plan to be modified or updated when the information in the plan is inadequate, incomplete, or fails to address a change including, but not limited to, the following:
 - 1. if the planned crop or cropping rotation, or introduction of a new crop is not currently addressed in an existing plan, unless the new crop will have fertility management similar to that crop originally planned;
 - 2. if nutrient source or soil test results indicate a change in nutrient recommendations;
 - 3. if 10 percent or greater change in acreage managed, or 30 acres, whichever is less; or
 - 4. if a change in manure production is 10 percent or greater, and will require significant management adjustments.
 - (d) A plan shall be maintained at all times to meet plan objectives, including implementation of best management practices, strategies, or a phased-in approach identified in the plan to achieve soil fertility within optimal ranges.
- (3) All testing of soils and natural organic fertilizer, agricultural byproducts, and agricultural process water done in accordance with 330 CMR 31.05(1) shall comply with the following:
 - (a) Each field, or group of fields with similar soils and crops but with combined acreage not exceeding 20 acres, shall be soil tested at least every 3 years. Soil tests shall include analyses for phosphorus, potassium, pH, and soil organic matter. Standard soil test analyses shall be conducted using the Modified Morgan extraction method.
 - (b) Nutrient values of agricultural byproducts and agricultural process water must be determined prior to land application and comply with the following:
 - 1. materials shall be analyzed for nitrogen (total nitrogen, and ammonia-N), total phosphorus, total potassium, percent solids;

- 2. if there is no prior sampling history, testing shall be done annually for a minimum of 3 consecutive years. The average of the results shall be used as a basis for nutrient allocation to fields. Materials shall then be tested every 3 years;
- 3. samples of these materials shall be collected, prepared, stored, shipped and tested following University of Massachusetts Amherst Extension guidelines for nutrient best management practices; and
- 4. tests shall be performed whenever there is a significant change in animal numbers, species, diet, storage method, bedding materials, or additions of other agricultural byproducts, including those from offsite.
- (c) When a plan requirement set forth in 330 CMR 31.05 is not recommended by the University of Massachusetts Amherst Extension guidelines for nutrient best management practices, the plan shall comply with and reference the industry specific alternative recommendation.

31.06 Requirements for the Application of Nutrients to Land Not Used for Agricultural Purposes

- (1) No person may purchase and apply, or authorize any person, by way of service contract or other arrangement, to apply any phosphorus containing fertilizer on lawn or non-agricultural turf, except when:
 - (a) a soil test taken not more than 3 years before the application indicates that additional phosphorus is needed for growth of that lawn or non-agricultural turf; or
 - (b) the phosphorus containing fertilizer is used to establish new lawn or non-agricultural turf on bare ground or as part of renovation of a lawn or non-agricultural turf area. The use of phosphorus for the purposes of establishing a new lawn or non-agricultural turf area is limited to the first growing season.
- (2) If the soil test indicates that additional phosphorus is needed for growth of a lawn or non-agricultural turf, application of additional phosphorus shall not exceed the University of Massachusetts Amherst Extension guidelines for nutrient best management practices.
- (3) No application of plant nutrients shall be made to lawns or non-agricultural turf:
 - (a) between December 1 and March 15;
 - (b) to frozen soil, snow-covered soil, saturated soil, soils that are frequently flooded, or soils when flooding is expected. An expectation of flooding includes, but is not limited to a prediction of heavy rain within a 24 hour forecast;
 - (c) within 20 feet of surface waters if using a broadcast application method; or within 10 feet of surface waters if using a drop spreader or rotary spreader with a deflector or a targeted spray;
 - (d) within a Zone I of a public water supply well;
 - (e) within 100 feet of surface waters that are used for public water supplies; or
 - (f) in an amount that is inconsistent with the annual recommended rate established by the University of Massachusetts Extension guidelines for nutrient best management practices for turf.

- (4) No application of plant nutrients shall be made to any impervious surface, including parking lots, roadways, and sidewalks, by means of direct application, spills, overspray, or run-off to impervious areas. If such direct application, spills, overspray, or run-off occurs, the plant nutrient must be cleaned completely from the surface and be either:
 - (a) contained or disposed of legally; or
 - (b) applied to lawn or non-agricultural turf as allowed.
- (5) In determining the amount of nitrogen and phosphorus that may be applied, the amount of these plant nutrients known to have been applied in any organic compost, natural organic fertilizer, biosolids, agricultural byproducts or other nutrient containing materials shall be accounted for. Any necessary adjustments shall be made to comply with the University of Massachusetts Amherst Extension guidelines for nutrient best management practices for turf. Any application of biosolids to land not used for agricultural purposes shall comply with the requirements of 310 CMR 32.00, Land Application of Sludge and Septage.

31.07 Soil Testing for Land Not Used for Agricultural Purposes

- (1) Except as provided for in 330 CMR 31.07(2), a soil test must be obtained prior to any initial application of phosphorus.
- (2) A soil test is not required if:
 - (a) the application is made for the purpose of establishing turf on bare ground;
 - (b) the application is made in accordance with the turf establishment guidelines of the University of Massachusetts Amherst Extension guidelines for nutrient best management practices for turf;
 - (c) the land has been disturbed such as by construction or tillage; or
 - (d) a lawn patch product is used.
- (3) If a soil test exists that is not more than 3 years old, it shall be used to determine the appropriate P2O5 application rate.
- (4) No person shall apply phosphorus containing fertilizer to turf when over seeding without basing the application on the results of a soil test.
- (5) Any subsequent phosphorus containing fertilizer applications to the same management unit shall be based on the results of a soil test.
- (6) Soil tests shall be valid for 3 years.
- (7) Soil tests shall be associated with individual properties or management units.
- (8) Standard soil test analyses shall be conducted using the Modified Morgan extraction method.
- (9) To avoid erroneous test results or erroneous recommendations regarding the efficient use of plant nutrients, soil sampling shall be done in accordance with

University of Massachusetts Amherst guidelines and shall include the following steps:

- (a) soils that are distinctly different based on appearance, crop growth or past treatment shall be sampled separately;
- (b) sample area shall be defined based on uniformity of texture, slope, drainage, color, and past pest and fertility management;
- (c) very wet soil shall not be sampled; and
- (d) a clean spade, auger, or sampling tube shall be used to obtain the soil sample from the surface down through, and including the primary rooting zone. For most plants, this includes the top 6 to 8 inches of soil.

31.08 Record Keeping Requirements

- (1) Any person who applies plant nutrients, except those making non-professional applications, shall maintain records for 3 years of each application made. The following information shall be recorded, when applicable
 - (a) name of applicator;
 - (b) date of application;
 - (c) address or location description of the application site,
 - (e) type and amount of nutrients applied;
 - (f) size of the area being treated;
 - (g) representative nutrient value or values;
 - (h) plant nutrient analysis of product used;
 - (i) method and rate of application;
 - (i) total amount used:
 - (k) an original or legible copy of the label of the plant nutrient; and
 - (l) the implementation of all activities or protocols recommended or required by the nutrient management plan, if applicable.
- (2) The records required under 330 CMR 31.00 shall be made available for inspection by the Department upon request.

31.09 Retailer Requirements

- (1) Any retailer who sells, or offers for sale, phosphorus containing fertilizer shall:
 - (a) display the product separately from non-phosphorus plant nutrients; and
 - (b) post in a location where phosphorus containing fertilizer is displayed a clearly visible sign, at least 11" x 17" in dimension, which reads as follows: "PHOSPHORUS RUNOFF POSES A THREAT TO WATER QUALITY. THEREFORE, UNDER MASSACHUSETTS LAW, PHOSPHORUS CONTAINING FERTILIZER MAY ONLY BE APPLIED TO LAWN OR NON-AGRICULTURAL TURF WHEN (i) a soil test indicates that additional phosphorus is needed for the growth of that lawn or non-agricultural turf; or (ii) is used for newly established lawn or non-agricultural turf during the first growing season."

31.10 Enforcement; Assessment of Civil Penalty

- (1) The Department may impose a fine on a person who violates any provision of these regulations as follows:
 - (a) not more than \$250 for a first violation, a penalty of not more than \$500 for a second violation, and \$1,000 for a third or subsequent violation; and
 - (b) each day a violation occurs under this section is a separate violation.
- (2) In assessing a fine imposed under this regulation, the Department shall give consideration to the following:
 - (a) the willfulness of the violation, the extent to which the existence of the violation was known to the violator, but uncorrected by the violator, and the extent to which the violator exercised reasonable care;
 - (b) any actual harm to human health or to the environment, including injury to, or impairment of, the use of the waters or the natural resources of the Commonwealth of Massachusetts;
 - (c) the nature and degree of injury to, or interference with, general welfare, health, and property;
 - (d) the extent to which the location of the violation, including location near areas of human population, creates the potential for harm to the environment or to human health and safety; and
 - (f) the extent to which the current violation is part of a recurrent pattern of the same or similar type of violation committed by the violator.

31.11 Appeal

Any person aggrieved by any decision of the Department over the assessment of a fine imposed under these regulations may appeal by filing a notice of appeal with the division of administrative law appeals within 10 days of receipt of the notice of the fine pursuant to the provisions set forth in G.L. c. 128, Section 2(k).

31.12 Exemptions

Educational institutions and researchers may apply to the Department for an exemption to these regulations for research, education, and demonstration purposes.